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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,815	01/21/2005	Noriyuki Tani	P26591	3780
7055 7590 12/27/2006 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			EXAMINER DEUBLE, MARK A	
			ART UNIT	PAPER NUMBER
			3651	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		12/27/2006	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 12/27/2006.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/521,815	TANI ET AL.	
	Examiner	Art Unit	
	Mark A. Deuble	3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/21/2005</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites both an apparatus and a process which renders the scope of the claims indefinite. Specifically, the claim preamble is directed to a substrate transfer apparatus while the body of the claim recites mounting-waiting and discharge waiting processes and the step of transferring substrate. The only structure recited is a detecting means. This renders the scope of the invention unclear because a claim may be directed to only one statutory class of invention. See IPXL HOLDINGS, V. Amazon.com, 430 F.3d 1377, 1384 (Fed. Cir. 2005). In this case, decided on November 17, 2005, the court citing to Ex Parte Lyell, 17 USPQ 1548 (BPAI 1990), stated as follows:

“the statutory class of invention is important in determining patentability and infringement.” *Id.* at 1550 (citing *In re Kuehl*, 475 F.2d 658, 665 [177 USPQ 250] (CCPA 1973); *Rubber Co. v. Goodyear*, 76 U.S. 788, 796 (1870)). The Board correctly surmised that, as a result of the combination of two separate statutory classes of invention, a manufacturer or seller of the claimed apparatus would not know from the claim whether it might also be liable for contributory infringement because a buyer or user of the apparatus later performs the claimed method of

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using the apparatus. *Id.* Thus, such a claim “is not sufficiently precise to provide competitors with an accurate determination of the ‘metes and bounds’ of protection involved” and is “ambiguous and properly rejected” under section 112, paragraph 2.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships include, but are not limited to the placement of the detecting means relative to the other parts of the transfer apparatus. As the examiner stated in the PCT/JP03/09887 application to which the present application claims priority, the applicant is attempting to define the subject matter of the claims in terms of the results to be achieved rather than structural terms necessary to achieve these results.

Claims 3-5 and 7-9 all include limitations relating the placement of the sensors to the size of the substrate being transferred. These limitations render the scope of the claim impossible to ascertain because the claims are directed to the transfer apparatus and not to the combination of the transfer apparatus and the objects being transferred. A size relationship between a part of the transfer apparatus of the present invention and something that is not part of the apparatus of the present invention may not be claimed because a person operating a similar conveyor apparatus could be guilty of infringing such an apparatus claim depending on a method of using apparatus rather than on the structure of the apparatus as is usually required for infringement of an apparatus claim. Such a relationship may be more appropriately in a claimed directed to a

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method of using the conveyor apparatus to convey items with a definite size relationship to the cylindrical guide element.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese document number 200-118678.

The Japanese document shows a substrate transfer apparatus for a component mounting machine 14 which transfers a substrate into and out from a mounting process conveyor 3 respectively with a mounting waiting process conveyor 2 and a and a discharge-waiting process conveyor 4. The mount waiting process conveyor is capable of making the substrate wait before the mounting process (see examiner's comments in PCT/JP03/09887). The discharge-waiting process conveyor is capable of making the substrate wait after transfer from the mounting process wait before a following process (see examiner's comments in PCT/JP03/09887). The mounting-waiting and discharge-waiting conveyors are independently driven so that they are capable of transfer of substrate to and from the mounting process conveyor simultaneously. A plurality of sensors 7-9, 12-15, and 18-20 may be provided on each conveyor. The sensors 7-9 provide a means for detecting that a plurality of substrates have been transferred into the substrate discharge-waiting process conveyor as part of a single transfer operation and they

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would provide a substrate arrival detecting sensor for detecting the mounted substrate transferred into the discharge-waiting process conveyor for certain types of substrates and mounted devices. The sensor 12-13 provide a plurality of substrate continuity-detecting sensors provided upstream of the substrate-arrival detecting sensors at different positions in a substrate transfer direction from one another for detecting an unmounted substrate being transferred at the same time as the mounted substrate. Thus the Japanese document shows all the structure required by claims 1-2 and 6.

In regard to the limitations of claims 3-4 and 7-9, it is noted that the spacing of the sensors is not specified relative to the size of the substrates being conveyed. However, the apparatus of the Japanese document is capable of being used with substrates of a particular size so that one of both of the substrate continuity detecting sensors would be spaced from the substrate-arrival detecting sensor by a distance that is between one and two times the length of the substrate as required by claim 3 and 7. Furthermore, even in the absence of a means for moving the sensors, they may never the less be considered to be movable because they could be dismounted from and remounted to the conveyor frames manually as required by claim 4. Finally, it is noted that three substrate continuity detecting sensors 12-14 are provided, so that the limitations of claims 8-9 would be required of the minimum substrate size was 1 unit and the maximum substrate size was less than 6 units. Thus the Japanese document shows all the structure required by claims 13-5 and 7-9.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese document number 2000-118678.

The Japanese document shows generally all the structure required by the claims. However, instead of being automatically movable as required by claim 5, the substrate continuity detecting sensor of the Japanese document is manually movable. However, it should be noted that automating a manual activity or, conversely, making an automated activity manual is not enough to distinguish over the prior art where the manual and automated activities accomplish the same result. See *In re Venner*, 262 F.2d 91, 95; 120 USPQ 193, 194 (CCPA 1958)

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited prior art not discussed above show various conveyor arrangements which could be used for transferring substrates with structures similar to that of the present invention.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A. Deuble whose telephone number is (571) 272-6912.

The examiner can normally be reached on Monday through Friday except for alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene O. Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

md

MARKA DEUBLE
PATENT EXAMINER
Mark Deuble